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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,715	11/13/2000	Tapio Mantysalo	413-009920-US(PAR)	7683

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03/25/2004

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EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 03/25/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/711,715

Applicant(s)

MANTYSALO ET AL.

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8,10-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. The indicated allowability of claim 14 is withdrawn in view of the newly discovered reference(s) to AAPA and In re Larson further in view of Björk et al., U. S. Patent No. 5880643. Rejections based on the newly cited reference(s) follow.

Specification

2. The disclosure is objected to because of the following informalities: the specification lacks section headings.

Appropriate correction is required.

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-2, 8, 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

Regarding **claim 1**, the applicant's admitted prior art (herein, AAPA) discloses a microphone structure comprising a microphone capsule (figure 1 and page 1, lines 18-36 and page 2, lines 1-23) with 1st and 2nd output contacts (OC1 and OC2), a converting means (page 1, lines 18-24) or M1; and preamplifier (Q1) with a 1st and 2nd output conductor; a 1st capacitor (C11) positioned between the two conductor outputs, which reads on a 1st capacitor; coupled to an electro-static discharge protector (VDR1) to the contacts of the microphone capsule, which indicates at least one electro-static discharge protector being of the microphone structure. Even

though, AAPA discloses that a resistor (R11 – impedance) may be added (in series) to lessen capacitive coupling, AAPA fails to specifically disclose a 1st impedance within the microphone capsule, and as well, AAPA fails to disclose the electro-static discharge protector within the microphone capsule. Thus, with AAPA disclosing other components, within the microphone capsule, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of AAPA by providing an impedance resistor such as resistor R11 and the electro-static discharge protector into the circuitry provided within the microphone capsule, since it has been affirmed that the use of one structure instead of a structure of multiple parts as that disclosed by the AAPA would be merely a matter obviousness to one skilled in the art of microphone structure and function. *In re Larson*, 144 USPQ, 347 349 (CCPA 1965).

Regarding claim 2, AAPA discloses a microphone structure comprising a microphone capsule (figure 1 and page 1, lines 18-36 and page 2, lines 1-23) with 1st and 2nd output contacts (OC1 and OC2), a converting means (page 1, lines 18-24) or M1; and preamplifier (Q1) with a 1st and 2nd output conductor; a 1st capacitor (C11) positioned between the two conductor outputs, which reads on a 1st capacitor; coupled to an electro-static discharge protector (VDR1) to the contacts of the outer surface on the microphone capsule, which indicates at least one electro-static discharge protector on the outer surface of the microphone structure. Even though, AAPA discloses that a resistor (R11 – impedance) may be added (in series) to lessen capacitive coupling, AAPA fails to specifically disclose a 1st impedance within the microphone capsule, and as well, AAPA fails to disclose the electro-static discharge protector within the microphone

capsule. Thus, with AAPA disclosing other components, within the microphone capsule, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of AAPA by providing an impedance resistor such as resistor R11 and the electro-static discharge protector into the circuitry provided within the microphone capsule, since it has been affirmed that the use of one structure instead of a structure of multiple parts as that disclosed by the AAPA would be merely a matter obviousness to one skilled in the art of microphone structure and function. *In re Larson*, 144 USPQ, 347 349 (CCPA 1965).

Regarding **claim 8**, AAPA and *In re Larson* discloses everything claimed as applied above (see claim 1). AAPA further discloses that components are comprised on the same circuit or circuit board (page 2, lines 5-6).

Regarding **claim 10**, AAPA and *In re Larson* discloses everything claimed as applied above (see claim 1). AAPA further discloses the electro-static discharge protector (VDR1) as being a varistor (page 2, lines 13-14).

Regarding **claim 11**, AAPA and *In re Larson* discloses everything claimed as applied above (see claim 1). AAPA and *In re Larson* fails to specifically disclose the electro-static discharge protector (VDR1) as a semiconductor (ZD). The examiner takes official notice that a Zener diode, which a semiconductor device/component was well known. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of AAPA and *In re Larson* by providing a Zener diode as electro-static discharge protector for the purpose of reducing noise problems or the like that may produced by components on a circuit board, wherein the Zener diode is a common component of a conventional ESD protection circuit.

6. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and In re Larson in further view of Hyatt et al., U. S. Patent No. 6642297.

Regarding **claims 11 and 12**, AAPA and In re Larson discloses everything claimed as applied above (see claim 1). AAPA and In re Larson fails to specifically disclose the electro-static discharge protector as a polymer component.

Regarding the polymer component, Hyatt et al. discloses a polymer composite materials for electrostatic discharge protection. Hyatt et al. disclosure comprises a semiconductor (claim 11) - (col. 5, lines 20-22), which reads on a polymer component.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of AAPA and In re Larson by implementing a polymer component such as a semiconductor for an electro-static discharge protector for the purpose of providing protection against electrical overstress as taught by Hyatt et al.

7. **Claim 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and In re Larson in further view of Björk et al., U. S. Patent No. 5880643.

Regarding claim 14, the applicant's admitted prior art (herein, AAPA) discloses a microphone structure comprising a microphone capsule (figure 1 and page 1, lines 18-36 and page 2, lines 1-23) with 1st and 2nd output contacts (OC1 and OC2), a converting means (page 1, lines 18-24) or M1; and preamplifier (Q1) with a 1st and 2nd output conductor; a 1st capacitor (C11) positioned between the two conductor outputs, which reads on a 1st capacitor; coupled to an electro-static discharge protector (VDR1) to the contracts of the microphone capsule, which indicates at least one electro-static discharge protector being of the microphone structure. Even

though, AAPA discloses that a resistor (R11 – impedance) may be added (in series) to lessen capacitive coupling, AAPA fails to specifically disclose a 1st impedance within the microphone capsule, and as well, AAPA fails to disclose the electro-static discharge protector within the microphone capsule. Thus, with AAPA disclosing other components, within the microphone capsule, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of AAPA by providing an impedance resistor such as resistor R11 and the electro-static discharge protector into the circuitry provided within the microphone capsule, since it has been affirmed that the use of one structure instead of a structure of multiple parts as that disclosed by the AAPA would be merely a matter obviousness to one skilled in the art of microphone structure and function. *In re Larson*, 144 USPQ, 347 349 (CCPA 1965). However, AAPA and *In re Larson* fails to disclose two electrostatic discharge protectors being used, even though AAPA disclose that electrostatic discharge protection may be acquired in many ways.

Regarding the two electrostatic discharge protectors, Björk et al., disclose the use of two semiconductor diodes for electrostatic discharge protection (figure 1, and col. 3, lines 60-64, col. 6, lines 31-35).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of AAPA and *In re Larson* in providing alternate ESD protection by incorporating to semiconductor diodes for the purpose of providing better protection as taught by Björk et al.

8. **Claims 4-7 and 13** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1-2, 8, 10 have been considered but are moot in view of the new ground(s) of rejection.

The applicant's arguments are essentially directed the use of the impedance resistor in series indicated by AAPA as being an optional addition to the circuit. In view of the fact that the AAPA provides support that the impedance is required to be larger to be most effective, the claim language of the invention fails to limit the claim language in respect to the advantage the use of the impedance resistor differing from that AAPA. An in respect the applicant's argument against In re Larson, the rejection is still maintained. Claim language of the claimed invention broadly interpreted indicates integration of commonly used components performing a parallel or same function, wherein the purpose or function of the components formed on the same circuit board or integrated circuit has not been present into claim language to overcome the prior art rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, D.C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG 
March 18, 2004


MINSUN OH HARVEY
PRIMARY INVENTOR